

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	318	weld\$4 same angle near2 incidence	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:14
L2	524	weld\$4 same angle near2 inciden\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:14
L3	530	weld\$4 same (angle angula\$5) near2 inciden\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:15
L4	12265	(laser weld\$4) same ((angle angula\$5) near2 inciden\$4 with (laser beam energy))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:16
L5	491	(laser with weld\$4) and (laser weld\$4) same ((angle angula\$5) near2 inciden\$4 with (laser beam energy))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:17
L6	99	(laser with weld\$4) and (laser weld\$4) same ((angle angula\$5) near2 inciden\$4 with (laser beam energy)) and (molten melt\$4 puddle pool) near5 (join\$4 weld\$4 seam junct\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:25
L7	24	(laser with weld\$4) and (laser weld\$4) same ((angle angula\$5) near2 inciden\$4 with (laser beam energy)) and (molten melt\$4 puddle pool) near5 (join\$4 weld\$4 seam junct\$4) and ((differ\$4 dissimilar\$4) near2 (side body bodies plate sheet work component element piece))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:27

EAST Search History

L8	29	(laser with weld\$4) and (laser weld\$4) same ((angle angula\$5) near2 inciden\$4 with (laser beam energy)) and (molten melt\$4 puddle pool) near5 (join\$4 weld\$4 seam junct\$4) and ((differ\$4 dissimilar\$4) near2 (side body bodies plate sheet work component element piece metal\$4 composition))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:30
L9	2	(laser with weld\$4) and (laser weld\$4) same ((angle angula\$5) near2 inciden\$4 with (laser beam energy)) and (molten melt\$4 puddle pool) near5 (join\$4 weld\$4 seam junct\$4) and ((differ\$4 dissimilar\$4) near2 (side body bodies plate sheet work component element piece metal\$4 composition)) and (ag silver) with (cu copper)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:33
L10	6	(laser with (weld\$4 join\$4 braz\$4)) and (laser weld\$4 join\$4 braz\$4) same ((angle angula\$5) near2 inciden\$4 with (laser beam energy)) and (molten melt\$4 puddle pool) near5 (braz\$4 join\$4 weld\$4 seam junct\$4) and ((differ\$4 dissimilar\$4) near2 (side body bodies plate sheet work component element piece metal\$4 composition)) and ((cu copper) with (weld\$4 join\$4 braz\$4))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:41
L11	78	training with (beam spot) with least with one	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:42
L12	74	training with (beam spot) with least adj one	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:42
L13	5	training adj2 (beam spot) with least adj one	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:55

EAST Search History

L14	3	weld\$4 with contact adj plate same (copper cu) same (silver ag) same laser	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:57
L15	1	weld\$4 near5 (contact plate) same (differ\$4 dissimilar) same (copper cu) same (silver ag) same laser	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 10:59
L16	5	(weld\$4 join\$4) with laser and (weld\$4 join\$4) near5 (contact plate) same (differ\$4 dissimilar) same (copper cu) same (silver ag)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:01
L17	102	(weld\$4 join\$4) with (differ\$4 dissimilar) with (copper cu) with (silver ag)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:02
L18	33	weld\$4 with (differ\$4 dissimilar) with (copper cu) with (silver ag)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:03
L19	10	weld\$4 with (differ\$4 dissimilar) with (copper cu) with (silver ag) not steel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:09
L20	46	laser with weld\$4 with (differ\$4 dissimilar) adj metal not steel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:09
L21	37	laser near2 weld\$4 with (differ\$4 dissimilar) adj metal not steel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 13:12
L22	1	("6143998").PN.	USPAT; USOCR	OR	OFF	2007/11/18 11:19
L27	1	L22 and (weld\$4 with ("15" "16"))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:21

EAST Search History

L28	1	(ag silver) near2 plate with (cu copper) adj body	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:57
L29	1	(bimetal trimetal) adj contact with laser	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:57
L30	0	(bimetal trimetal) adj contact same laser with (weld\$4 join\$4 bond\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:58
L31	1	(bimetal trimetal) adj contact and laser with (weld\$4 join\$4 bond\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 11:58
L32	1	(bimetal trimetal) adj3 contact same laser with (weld\$4 join\$4 bond\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 12:01
L33	0	((bi adj metal) (tri adj metal)) adj2 contact same laser with (weld\$4 join\$4 bond\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 12:01
L34	1	((bi adj metal) (tri adj metal)) adj3 contact same laser with (weld\$4 join\$4 bond\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 12:02
L35	4	((bi adj metal\$3) (tri adj metal\$3) bimetal\$3 trimetal\$3) and contact and laser with (weld\$4 join\$4 bond\$4)	JPO	OR	ON	2007/11/18 12:33
L36	9	((bi adj metal\$3) (tri adj metal\$3) bimetal\$3 trimetal\$3) same (cu copper) same (ag silver)	JPO	OR	ON	2007/11/18 12:33
L37	1	("5595670").PN.	USPAT; USOCR	OR	OFF	2007/11/18 13:12
L38	1	37 and yag	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 13:26

EAST Search History

L39	4434	yag with solid adj state with laser	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 13:26
L40	52	yag with solid adj state with laser with weld\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 13:33
L41	82	copper with silver adj plated and weld\$4 with copper	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 13:34
L42	11	copper with silver adj plated and weld\$4 with copper with laser	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 13:39
L43	0	copper with silver adj plated and weld\$4 with copper and weld\$4 with laser not 42	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 13:40
L44	71	41 not 42	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/18 13:40

DERWENT-ACC-NO: 2000-678476
DERWENT-WEEK: 200066
COPYRIGHT 2007 DERWENT INFORMATION LTD
TITLE: Improved process for laser welding car use galvanized steel plates -
INVENTOR: CHEN, J; TSAI, L
PATENT-ASSIGNEE: CHEN J[CHENI] , TSAI L[TSAIL]
PRIORITY-DATA: 1998TW-0103879 (March 17, 1998)
PATENT-FAMILY:
PUB-NO PUB-DATE LANGUAGE PAGES MAIN-IPC
TW 391902 A June 1, 2000 N/A 000 B23K
026/00
APPLICATION-DATA:
PUB-NO APPL-DESCRIPTOR APPL-NO APPL-DATE
TW 391902A N/A 1998TW-0103879 Mar 17, 1998
INT-CL (IPC): B23K026/00
ABSTRACTED-PUB-NO: TW 391902A
BASIC-ABSTRACT:

NOVELTY - This invention relates to an improved process for laser welding car use galvanized steel plates using high-power laser. Generally, while laser welding surface-treated, corrosion-resistant steel plates, such as laser welding galvanized steel plates, it is crucial to control the butt gap between steel plates of different thickness, to tightly join the butt faces, and to control the trimming angle between the trimming faces of the steel plates, or will otherwise result in sunk weld path. This invention controls process parameter of laser welding, including pre-determined welding gap, laser incidence angle, laser focal point location, welding power, and the welding speed, and uses laser energy to melt the molten metal formed from the thicker steel plate, so as to fill the butt gap between two steel plates. The weld path obtained is wider and a smooth transition is formed between two plates of different thickness. Such a process not only reduces the number of the air holes in the weld path, but also reduces the limitations required in trimming the steel plates.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: IMPROVE PROCESS LASER WELD CAR STEEL PLATE

DERWENT-CLASS: M23 P55 X24

CPI-CODES: M23-D05;

EPI-CODES: X24-D03A;

SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C2000-206226
Non-CPI Secondary Accession Numbers: N2000-502212